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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
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10/761,655

01/20/2004

Jiun-Nan Chen

67,200-937

3380

7590

09/29/2004

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EXAMINER

TRA, TUYEN Q

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

*AK*

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/761,655             | CHEN, JIUN-NAN      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Tuyen Q Tra            | 2873                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0104</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

**Claim Rejections - 35 USC § 112**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 recites the limitation "the transparent substrate" in 3-4. There is insufficient antecedent basis for this limitation in the claim.

**Claim Rejections - 35 USC § 102**

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Atobe et al. (U.S. Pat. 5,999,306A).

a) With respect to claim 1, Atobe et al. discloses a method of manufacturing spatial light modulator and electronic device employing it in Figure 2 comprising of a substrate (item 220) having a first surface; a deflection electrode (item 216) formed at least partially on the first surface of the substrate (220); a support structure (item 210) connected at least partially to the first surface of the substrate (220); and a deflectable element (item 102) supported by the support structure.

b) With respect to claim 2, it is inherent from Atobe 's structure that when application of the same polarity of charge to both the deflection electrode and the deflectable element, the deflectable element is deflected away from the transparent substrate.

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c) With respect to claim 3, it is inherent from Atobe's structure that when application of the opposite polarity of charge to both the deflection electrode and the deflectable element, the deflectable element is deflected toward from the transparent substrate.

4. Claims 4-7, 15, 16, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Little et al. (U.S. Pat. 6,034,807A).

a) With respect to claims 4, 15 and 16, Little et al. disclose apparatus of a bistable paper white direct view display and further with method for providing and imposing in Figure 3a comprising of a first substrate (not numbered, bottom substrate) having a first surface; a first deflection electrode formed at least partially on the first surface of the first substrate; a deflectable element connected to the first surface of the first substrate and registered with the first deflection electrode; a second substrate (item 40) assembled and spaced opposite the first surface of the first substrate, the second substrate having formed therein a second deflection electrode registered with the deflectable element (see below figure).

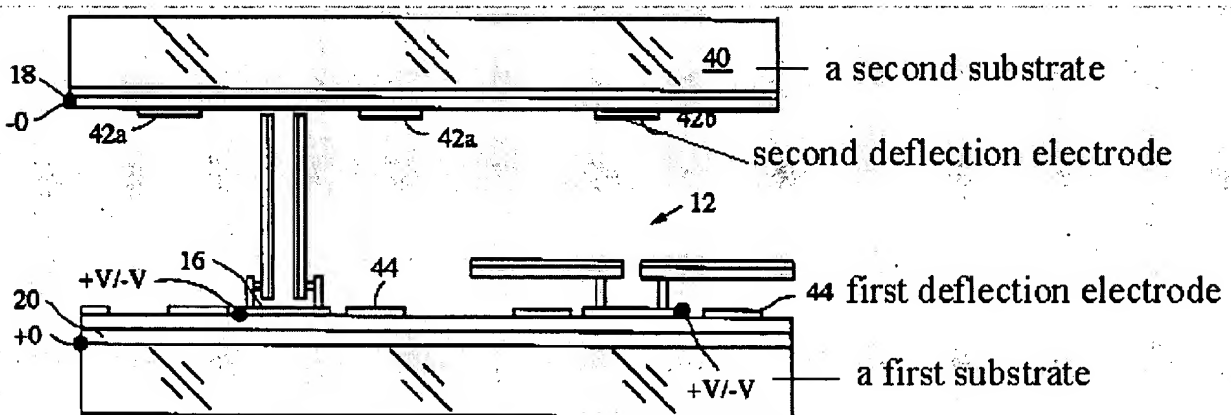
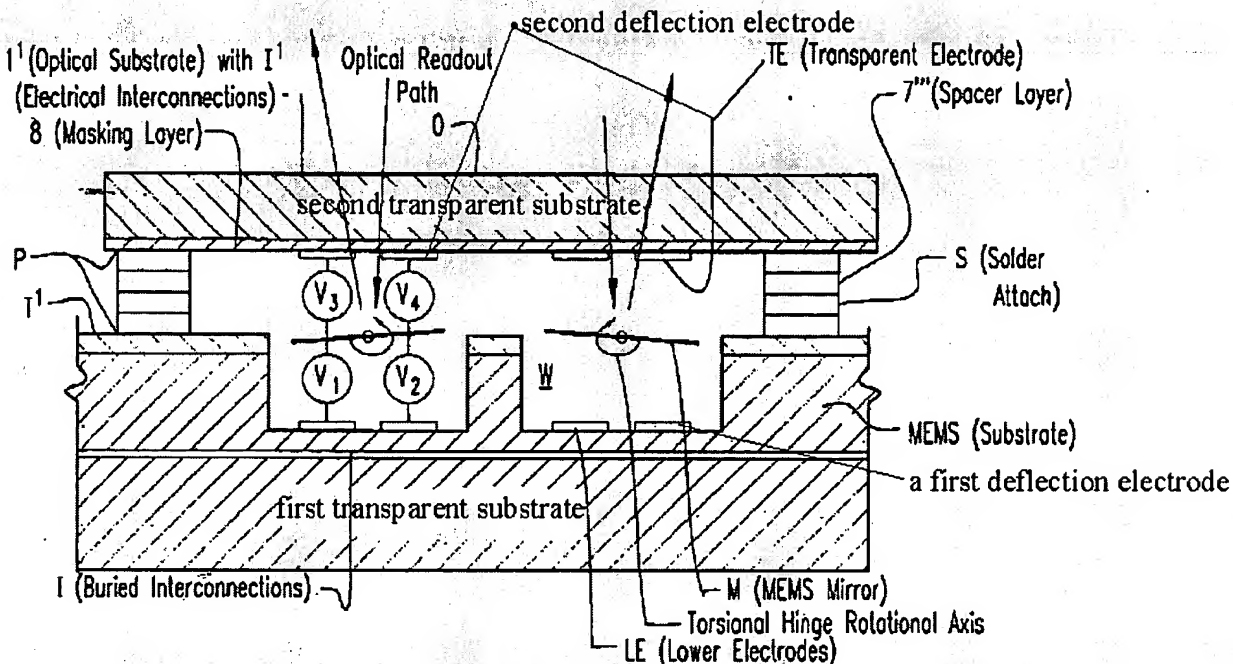


FIG.3a

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- b) With respect to claims 5 and 19, it is inherent from Little 's structure that when application of the same polarity of charge to both the deflection electrode and the deflectable element, the deflectable element is deflected away from the transparent substrate.
  - c) With respect to claims 6 and 20, it is inherent from Little 's structure that when an application of the opposite polarity of charge to both the deflection electrode and the deflectable element, the deflectable element is deflected toward from the transparent substrate.
  - d) With respect to claim 7, Little et al. further discloses in Figure 1 the first substrate (item 30, Fig. 1) is a glass substrate (i.e. transparent substrate).
5. Claims 4, 9, 10, 11, 13-15, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Shrauger et al. (US Patent 6,633,426 B2).
- a) With respect to claims 4, 11 and 15, Shrauger et al. disclose apparatus of a bistable paper white direct view display and further with method for providing, assembling and imposing in Figure 3a comprising of a first transparent substrate (not numbered, bottom substrate) having a first surface; a first deflection electrode formed at least partially on the first surface of the first substrate; a deflectable element connected to the first surface of the first substrate and registered with the first deflection electrode; a second transparent substrate assembled and spaced opposite the first surface of the first substrate, the second substrate having formed therein a second deflection electrode registered with the deflectable element (see below figure).



- b) With respect to claims 9, 10, 13, 14, 17 and 18, Shrauger et al. further discloses apparatus and method wherein the second substrate is a transparent substrate; wherein second deflection electrode is a transparent electrode (see above figure).

### Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Little et al. (U.S. Pat. 6,034,807A), as applied to claim 1 above, in view of Atobe et al. (U.S. Pat. 5,999,306A).

Little et al. disclose a bistable paper white direct view display in Figure 3a comprising of a first substrate (not numbered, bottom substrate) having a first surface; a first deflection electrode formed at least partially on the first surface of the first substrate; a deflectable element connected to the first surface of the first substrate and registered with the first deflection electrode; a second substrate assembled and spaced opposite the first surface of the first substrate, the second substrate having formed therein a second deflection electrode registered with the deflectable element (see below figure).

However, Little et al. does not disclose the first deflection electrode is a transparent electrode. Within the same field of endeavor, Atobe et al. disclose in Figure 3B wherein the first electrode is a transparent electrode (made of substance such as ITO).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct display device with first electrode on first substrate such as disclosed by Little et al., and with transparent electrode such as discloses by Atobe et al., for purpose of allowing the light going through.

### **Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Li et al. (US Patent 6,729,545 B2) disclose an integrated scanner on a common substrate having an omnidirectional mirror in Figure 3 with first substrate (122), first electrodes (146), second transparent electrodes (144), second transparent substrate (148), deflectable mirror (136) and hinge (138).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (571) 272-2343. The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (571) 272 - 2328. The fax number for this Group is (703) 872-9306.

tt

September 19, 2004

  
Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800